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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/598,680	06/21/2000	Jeffrey Allen Green	0933	7410

7590 06/04/2007  
Blakely Sokoloff Taylor & Zafman  
12400 Wilshire Boulevard  
Seventh Floor  
Los Angeles, CA 90025-1030

EXAMINER
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FIGUEROA, MARISOL

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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06/04/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/598,680	<b>Applicant(s)</b> GREEN ET AL.	
	<b>Examiner</b> Marisol Figueroa	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-9 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                 | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Petition***

1. Applicant's petition under 37 CFR 1.181 filed on 1/5/2007 is DISMISSED because the petition under that rule was not filed within two months of the filing date of the action or notice from which relief is requested. Furthermore, an official petition was not submitted.

### ***Response to Arguments***

2. Upon further consideration of the claims and specification the previous claim rejections under 35 USC § 101 are withdrawn.
3. Applicant's arguments with respect to claims 1-9, and 11 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

4. Claim 4 is objected to because of the following informalities:
  - (a) On line 3 of claim 4, the word "levels" should apparently be amend to the word --values-- because it seems to refer to the term "received values" in line 8 of claim 1.
  - (b) On line 8 of claim 1, the word --preprocessed-- should apparently be added before the term "received values" because the term "preprocessed receive levels" in claim 1 seems to refer to the term "received values" in claim 1, in order to use the same language through the claims.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 2617

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-9, and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the received values" in line 8.

Claim 2 recites the limitation "the analog section" in lines 3-4.

There is insufficient antecedent basis for these limitations in the claim.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Regarding claim 1**, Kim discloses in a communications system including a first modem operatively connected to a second modem via a communications network comprising digital trunks with digital impairments of repetitive nature with a repetition frame consisting of one or more time slots and analog loops, the first modem (i.e., mobile communication terminal) performing a method of compensating for inter-modulation distortion (IMD) present in signals received from said second modem, said method for compensating comprising:

preprocessing to minimize effects of impairments other than IMD, to derive best estimates  $x'$  of the received values that would correspond to a set of transmit values  $y$  (col. 2, lines 24-28; col. 3, lines 8-56; the mobile communication device comprises a receiving circuit for

Art Unit: 2617

receiving a CDMA signal and is converted to an IF signal that includes a main signal and IMD products, then the main signal is filtered (i.e., preprocessed) so as to leave only IMD products, that corresponds to estimates of  $x'$ );

deriving an IMD based constant  $I$  from  $x'$  (col. 3, lines 50-55; after the signal is filtered only IMD products remains that corresponds to  $x'$  and IMD based constant); and

removing an IMD component from the received estimates  $x''$  to derive an IMD removed new estimate  $x''$  (col. 3, line 57-col. 4, lines 1-7; col. 4, lines 45-51; the inter-modulation product signal generated is applied to a phase shifter, which phase shifts the signal by an amount sufficient to achieve cancellation of the IMD products output by the receiver that corresponds to  $x''$ )

in accordance with an equation:  $x'' = x' - I (by^3)$  where  $b$  is a system constant (the equation is represented by the circuit illustrated in figure 3 that removes or cancel IMD products from a signal received at a mobile communication terminal).

### ***Allowable Subject Matter***

8. Claims 2-9, and 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Prior Art of Record***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) TUNG et al. (US 6,512,787 B1) – Digital Impairment Learning Method.

(b) ORIHASHI et al. (US 2001/0026596 A1) – Digital Reception Apparatus.

Art Unit: 2617

(c) BIRCHLER et al. (US 5,406,588)- Method and apparatus for mitigating distortion effects in the determination of signal usability.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marisol Figueroa whose telephone number is (571) 272-7840. The examiner can normally be reached on Monday Thru Friday 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Marisol Figueroa  
Art Unit 2617

  
LESTER G. KINCAID  
SUPERVISORY PRIMARY EXAMINER